

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND THE PRODUCTION AND SALE OF PURE HONEY.

VOL. XVII.

CHICAGO, ILL., MARCH 30, 1881.

No. 13.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
974 WEST MADISON ST., CHICAGO, ILL.

TERMS OF SUBSCRIPTION:

WEEKLY—(52 numbers) \$2.00 a year, in advance.
Three or Six Months at the same rate.
SEMI-MONTHLY—The first and third numbers of
each month, at \$1.00 a year, in advance.
MONTHLY—The first number of each month, at
50 cents a year, in advance.

Any person sending a Club of six is entitled
to an extra copy (like the club) which may be sent to
any address desired. Sample copies furnished free.
Remit by money-order, registered letter, ex-
press or bank draft on Chicago or New York, payable
to our order. Such only are at our risk. Checks on
local banks cost us 25 cents for collecting.

Free of postage in the United States or Canada.
Postage to Europe 50 cents extra.

Entered at Chicago post office as second class matter.

CORRESPONDENCE

Bee-Keeping in Ceylon.

We acknowledge, with thanks, the receipt of two copies of the *Ceylon Observer*, from J. Matthew Jones, Esq., of Halifax, Nova Scotia, who kindly sent them to us after having received them from a friend in that far-off island. They contain articles on the bees of Ceylon. In one of them the editor remarks as follows:

We are much indebted to our visitor, Mr. Frank Benton from the United States, for calling public attention in so interesting and practical a manner to a subject which has been too long neglected in Ceylon. It is far from creditable to the natives of Ceylon and other comparatively permanent residents in the island that no systematic attempts have been made to utilize the honey-making bees so common in our forests. Mr. Benton has formed a very high opinion of the small island bee (*Apis Indica*) and it is purely from his interest as an apiarist that he has come forward to remind us of the value of a totally neglected industry. Cyprus, at this moment, has over 30,000 bee-hives in full operation, and official tradition has it that the number once exceeded 200,000. Mr. Benton is evidently of opinion that if the Sinhalese villagers as well as town residents took up the business with good will and intelligence, the "spicy island" could very soon become no mean rival to the classical island of Asia Minor. Be this as it may, we trust the subject will not be lost sight of by our Government Agents and their subordinate headmen. Our low-country rural population wants an official leading, and this could come through the village headmen or the village school-master, or both, if only the hint were given through superior authority. At the same time simple instructions as

to the best mode of bee-keeping and honey-harvesting ought to be printed and circulated in the vernacular. Some years ago attention was called to the subject of "bee-keeping in Ceylon" in the columns of the *Observer*, but we cannot recall the date of the communication. Meantime as of interest in connection with Mr. Benton's paper we republish all that appears in Tennent's "Natural History of Ceylon" on the subject of bees:

Bees.—Bees of several species and genera, some unprovided with stings, and some in size scarcely exceeding a housefly deposit their honey in hollow trees or suspend their combs from a branch. The spoils of their industry form one of the chief resources of the uncivilized Vedda, who collect the wax in the upland forests, to be bartered for arrow points and clothes in the lowlands.

A gentleman connected with the department of the Surveyor General (Mr. W. Ferguson) writes to me that he measured a honey comb which he found fastened to the overhanging branch of a small tree in the forest near Adam's Peak, and found it 9 links of his chain or about 6 feet in length and a foot in breadth where it was attached to the branch, but tapering towards the other extremity. "It was a single comb with a layer of cells on either side, but so weighty that it broke the branch."

I have never heard of an instance of persons being attacked by the bees of Ceylon, and hence the natives assert, that those most productive of honey are destitute of stings.

The Carpenter Bee.—The operation of the most interesting of the tribe, the Carpenter Bee, I have watched with admiration from the window of the Colonial Secretary's official residence at Kandy. So soon as the day grew warm, these active creatures were at work perforating the wooden columns which supported the verandah. They poised themselves on their shining purple wing, as they made the first lodgement in the wood, enlivening the wood with an uninterrupted hum of delight which was audible to a considerable distance. When the excavation had proceeded so far that the insect could descend into it the music was suspended, but renewed from time to time, as the little creature came to the orifice to throw out the chips, to rest, or to enjoy the fresh air. By degrees a mound of sawdust was formed at the base of the pillar consisting of particles abraded by the mandibles of the bee. These when the hollow was completed to the depth of several inches, were partially replaced in the excavation after being agglutinated to form partitions between the eggs, as they were deposited within. The mandibles of these bees are admirably formed for the purpose of working out the tunnels required, being short, stout, and usually furnished at the tip with 2 teeth which are rounded somewhat into the form of cheese-cutters. These, when brought into operation, cut out the wood in the same way as a carpenter's double gouge, the teeth being more or less hollowed out within. The female alone is furnished with these powerful instruments. In the males the mandibles are slender as compared with those of the females. The bores of some of these are described as being from 12 to 14 inches in length.

Mr. Benton's paper is as follows:—

The Introduction of Bee-Culture into the Island of Ceylon.

During a short stay in Ceylon, I have made diligent inquiry in this part of the island regarding the honey bee found here and have also endeavored to learn whether any bees were kept in hives or not. In the vicinity of Galle, I found no bees, except the wild bees in the jungle. When asked why they did not keep bees, the natives invariably replied: "It is too much trouble." But I do not think they know how to manage these insects. I was told that in the interior, bees were kept in earthen pots or jugs, a statement which was, however, contradicted by most persons with whom I talked.

There is no reason why a region so productive as the Island of Ceylon, and so well adapted in every way to the raising of bees, should not yield annually honey and wax to the value of many thousand pounds sterling. In the United States of America, this industry is still in its infancy, improved methods in bee-culture not having obtained in all parts and the "field" not being one-tenth occupied; yet the annual honey and wax product of that country exceeds 1,000,000 pounds sterling, and tons of pure nectar are yearly shipped to Europe, much of it being sold in English markets at 4½d to 6d per lb. One weekly publication and 6 monthlies are devoted to bee-culture in America. Those familiar with the condition of agriculture in Great Britain and Ireland admit that the industry is sadly neglected, yet movable comb bee hives with improved methods are gaining ground, and England has one journal devoted to the interests of apiarists. About a year ago I came to the Island of Cyprus, mainly for the purpose of rearing and sending to European countries and to America queen bees of the highly valuable race found on that island. Among the Greek and Turkish peasants of Cyprus I found a system of bee-keeping which, though far behind the modern approved methods, is still superior to the cruel plan yet followed largely in many of the countries of Europe, notably in France, and even in England, namely: the barbarous practice of brimstoning the bees to obtain their honey. The native bee-owners in Cyprus place the bees in clay cylinders, some of which are baked, others sun-dried, and these are then piled up and covered with a roof or embedded in the walls of the houses. The cylinders, which are about one yard long and 8 or 10 inches in diameter, have their ends closed by stone disks plastered in with clay, a small entrance hole being left the bees at the front end. When the time for taking the honey arrives the peasant bee-keeper removes the rear disk and having smoked the bees from the rear combs, cuts out a portion of the latter, leaving the bees, however, some combs of honey for their subsistence until the next gathering season arrives. According to the books of the Collector of Tithes the number of hives of bees kept in Cyprus in 1878 was 32,432, and the sales of honey and wax was no inconsiderable item to the peasant owners of bees.

If that poor barren Island, Cyprus, successfully robbed by various govern-

ments and rulers, and for more than 300 years under Turkish misrule, could constantly derive benefit through the culture of bees, surely Ceylon, under fostering Britain's care, can show a result a hundred-fold greater. That Cyprus in its flourishing days, before it was so nearly stripped of its forests, yielded much better results in this direction is shown by the figures given me by the officer mentioned above, who stated that there formerly existed on the island 200,000 hives of bees. In the scattering of pollen from flower to flower and consequent complete fertilization of the blossoms insuring a larger yield of fruits or seeds, the bees play no unimportant part. Here then is an industry that should go hand in hand with fruit growing, coffee planting, cotton raising, etc., and should add to the wealth of Ceylon by putting into a marketable form the nectar which now "wastes its sweetness on the desert air."

The Dutch Government seeing the advantages likely to accrue through the cultivation of bees in Java, sent to that possession several years ago a native of Holland, commissioning him to transport from Europe colonies of the Italian and Cyprian bees, and to superintend their introduction into that island. If this undertaking had not been successful, it is only because the government referred to was so unfortunate as to have selected for the work a man lacking the necessary practical experience and qualifications. The undertaking, however, has by no means been relinquished, and I feel safe in predicting that living colonies of the species *Apis mellifica* will soon be landed in Java, having myself brought safely as far as Ceylon, 17 colonies of Cyprian and Holy Land bees, which are to be taken to that island.

For the Island of Ceylon, the rude method of keeping bees practiced in Cyprus and the adjacent Mediterranean countries would be preferable to no bee-culture at all, yet as wood here is abundant, hollow logs might be sawed into suitable lengths, a board nailed over the end for a cover, and the hive thus formed placed upon its open end upon a stand a few inches from the ground. An auger hole bored through the board cover would let them enter a box placed over it, and there deposit surplus honey. When filled, or at the end of the honey season, the box can be removed without disturbing the bees in the body part of the hive. Or, boxes of about 2,000 inches capacity can be treated in the same manner. Hiving the bees simply consists in shaking the cluster from the tree upon which it has lodged into the box, or into a basket, and then pouring it down before the hive. Most of the natives have little fear of bees; moreover, when bees are about to swarm, it is their instinct to gorge themselves with honey and when their honey-sacs are thus filled, they never sting unless pressed in the hand or under the clothing.

The simple methods indicated above are surely not beyond the comprehension of the natives of Ceylon; indeed, I believe an additional step might be taken at the outset—a step which in the long run would be found wise.

Farm hives—something essential to modern bee-culture—might be intro-

duced into some of the government gardens, and then would find favor elsewhere. Notches in the upper edge of the hive would insure the placing of the frames at proper distances, one from another, and the main advantages of the movable comb system would be learned by practice in handling the bees. To start this work, the government might manufacture and sell at cost simple movable comb hives, perhaps even stocked with bees, and for the present exempt the industry from taxation.

These are the ideas which suggest themselves to the mind of one whose stay in Ceylon must necessarily be very short, but who feels an interest in seeing a favorite pursuit receive the attention its importance demands.

FRANK BENTON.

For the American Bee Journal.

How to Feed Bees in Winter.

A. BENEDICT.

A great many bees are lost in April for the want of a little care; young bees are hatching rapidly, consume honey fast and may get out of feed; and they should be watched closely. A little feed may save many that otherwise would perish. If the weather is too cold for the bees to fly, I take the hive into a warm room, remove the cap and place instead a box that will fit tightly, so that the bees cannot escape. This box has neither top nor bottom. On the frames I put a sheet of newspaper, leaving plenty of space for the bees to come up in the box; the paper is to keep the bees from soiling the hive. I place the feed in the box and cover the box with mosquito bar. The hive should be put by a window to have plenty of light. After the bees have had a good cleansing flight I darken the window and let the room gradually cool, and the bees will go down and cluster. In this way bees can be fed and have a flight in the coldest weather. If the combs are very wet the hive should be put in a dark, dry and cool room, until the combs are dry. A good colony of bees will stand any amount of cold if they are kept dry. The only object for housing bees is to save honey.

Bennington, Ohio.

For the American Bee Journal.

Do Bees Puncture Fruit?

DR. WM. R. HOWARD.

To the question "Do bees injure or destroy sound grapes?" I answer no, positively. I have tried the following experiments: Bees were covering the grapes in the vineyard and seemed actually intoxicated on the wine. Removing several bunches, some of which had punctured berries and some sound ones, were taken to the apiary, and the bees soon found them and went to work vigorously. As soon as the punctured ones were exhausted the bees abandoned them and went in quest of something better. Then the bees were furnished some of the same lot and closed in the hive; as soon as the punctured ones were exhausted they seemed uneasy, then bunch after bunch of sound grapes were given them, which were eagerly covered, but as soon as it was found that none were punctured they fell back in dismay. Others conducted similar experiments, and nearly all had the same reports to make. I had one man come to me and tell me that his bees would clean them up all alike, so I went over to his place to conduct the experiment and satisfy myself, and when we arrived, lo! wasps, bees and ants were all promiscuously engaged in the feast; so we cleaned up and commenced anew, minding the wasps away for a few hours, and the fruit was abandoned as before, and after being left an hour or more to themselves, again we returned and bees and wasps were promiscuously engaged. Wasps were kept away by entomologists' nets to catch them as they came up, and a pair of collector's forceps to pick up those which escaped and alighted. Now for the physiological reasons why bees cannot commit the offenses charged against them.

The mandibles of the honey bee are not dentate or serrate, but are simply smooth, and beautifully rounded at the points, spoon or scoop-shaped, covered on the body with fine hairs rather long, and on the edges are covered with still finer hair, with a second row around the internal surface just suited to work soft wax and brush it up and give it the proper finish. If anyone will examine these mandibles with a good microscope it will satisfy him at a glance of the incapability of the honey bee to damage, by puncture, any fruits whatever.

Kingston, Texas, March 11, 1881.

For the American Bee Journal.

Perforated Zinc to Confine Queens.

D. A. JONES.

Mr. Dadant misconstrued my remarks at the Cincinnati Convention on the above subject. I claimed to have discovered, by the use of a perforated metal division board, that I could take far more comb honey from the body of the hive—not the second story, as I use one-story hives. I did not advise two-story hives, for I can accomplish better results with a single story. I said some bee-keepers, more especially ministers, wanted to leave their hives on the Sabbath day, and occasionally at other times, and that by lifting the comb with the queen and placing it behind the perforated metal division, they could not swarm, or if they did, they would return to the queen. Queens might be killed in a queen-yard sooner than in a hive; however, I have had none killed in the hive yet, and if I had, I would much rather lose the queen alone than the queen and swarm, too.

I am very glad Mr. Dadant mentioned his loss of one, and the conclusions he came to in the queen-yard trial. I will test the matter further this year. I am not aware that any person ever tried my plan of procuring comb honey in the brood chamber. I have not had enough experience with it to be very positive; but it appears to be all that can be desired so far, and I have prepared part of a lengthy article on the matter, which I hope to publish before the honey season sets in.

Years ago I advocated extracted honey, when I had to introduce it on the market, against popular prejudice; not so now. Many who thought comb honey was the most remunerative, are now modifying their opinions in favor of the extracted. Now, if my plan of taking comb honey from the brood chamber works as it did last fall, what would you think if you heard of people turning all their extracted into comb honey, after the harvest was over, and this within a few days? I have great respect for Mr. Dadant's opinion, and his efforts in marketing extracted honey deserve the thanks of all bee-keepers.

Beeton, Ontario, Canada.

For the American Bee Journal.

Theory and Practice.

L. H. PAMMEL, JR.

Without theory an apiary can never be conducted systematically, nor can any one master the science of bee-keeping without having acquired a theoretical knowledge of how an apiary should be conducted. True, men that only had a practical experience have met success, and through their labors bee-keeping has become a science, but their success was acquired through hard and patient toil. Hundreds of bee-keepers have never inquired into the cause of dysentery; nor do they know where wax comes from. Though the production of wax has nothing to do with the management of an apiary, it is one of the peculiarities of the industrious insect; yet, strictly not an evolution, and made from natural causes, no naturalist has as yet been able to say how honey is transformed into wax.

While it is true that all cannot be theorists, it is also true that theory alone cannot, will not, make us successful; but when we put correct theory into practice, we become masters of anything which we may undertake. Failures in bee-keeping and all other pursuits, are

in most cases due to ignorance of the subject. Our agricultural schools are condemned by many, for teaching too much science. Such should not be the case, for we should elevate our pursuits as a scholar refines his thoughts. There is too much science in agriculture and bee-keeping for mere practice. There is every opportunity to master the theory. Our BEE JOURNAL is doing a noble work; so also is such able books as Prof. Cook's Manual of the Apiary and Quinby's New Bee-Keeping. The bee-keeper and the farmer should have the same standing among their fellow-men as the merchant or the lawyer, and to that aim our agricultural colleges are working, and I hope that at a day not far distant they will be attended more. I also hope that our agricultural, horticultural and bee papers will be in larger demand, so that the editors will receive a fair recompense for their labors.

LaCrosse, Wis., March 15, 1881.

For the American Bee Journal.

Bee Farming in Ontario.

WM. F. CLARKE.

In April last, the Government of Ontario appointed a Commission to investigate the condition and prospects of agriculture in this Province. Their report has been presented to the Legislature, in the shape of 6 large octavo volumes, comprising about 2,400 pages. The first of these volumes contains the report proper, the remaining 5 being filled with the evidence on which said report is based. A brief extract from the report on bee-keeping, will no doubt interest the readers of the AMERICAN BEE JOURNAL. The Commissioners, in summing up on this topic, remark as follows:

"The bee-farming industry, in the Province of Ontario, had not, until recently, attracted a very large share of attention. For some years, however, it has been carried on by several persons with judgment and intelligence, upon improved methods, and very satisfactory results have attended these efforts. To-day, the Province can probably boast of operations, in connection with this industry, as spirited and enterprising as can be found in any part of the world.

The Commissioners have noticed with pleasure the formation of a Bee-keepers' Association, and have no doubt the bee-masters will derive as much advantage from mutual co-operation and frequent consultation, as the dairymen, fruit-growers and others."

This official recognition of our association is replete with encouragement, because it furnishes ground to hope that the government will enrich it with a grant of public money. The Province gives \$1500 a year in aid of our 2 Dairy Associations, and \$750 a year in aid of our Fruit Growers' Association, besides \$10,000 a year toward the funds of the Provincial Agricultural Association. As the result of this liberality, our Dairy Associations are able to secure the best talent at their annual meetings, which are schools of dairying, holding 3 days. This year, we had Prof. Arnold, Hon X. A. Willard, Prof. Roberts, and Hon. Harris Lewis, veteran teachers of dairy science from the United States; besides our own native dairymen. The Fruit Growers' Association is enabled by means of the government bounty, to hold meetings for discussion and instruction twice a year in various parts of the Province, and all these bodies are in a position to disseminate reports and other documents full of information, with a liberal hand. We hope soon to have our Bee-keepers' Association in a like position, and then our prominent apian brethren across the lines may expect cordial invitations to come over and talk to us at our annual meeting, expenses paid, and something to boot.

Up to the present time, no large foreign trade has been done in Canadian honey. In 1879 and 1880, Canada exported 7,940 lbs. weight, a small amount in itself, but indicating the commencement of a foreign trade. It would seem that hitherto the home consumption has been well nigh equal to the supply. The home demand will doubtless in-

crease as our bee-keepers learn the art of putting up honey in attractive packages. Much of it has been thrown on the market, a wretched conglomerate of broken comb, brood, and millers' nests. No wonder customers do not care to buy such a mess. Very few of our people know anything about the extracted honey, or tempting looking sections of comb honey. There is every prospect of increased attention being paid to bee-keeping, but the country will absorb most of the extra product for some time to come. There is not a town or village where the sales of honey might not be multiplied tenfold, as the result of a better style of bee-keeping. At present, it looks as if the business in this country were capable of indefinite expansion and on the eve of it.

Listowell, Ont.

For the American Bee Journal.

The Sale of Extracted Honey.

J. D. KRUSCHKE.

Extracted honey has been offered the consumer in this country for a number of years, but to-day, at the average, the demand is not so great as 5 or 6 years ago; the cause is undoubtedly adulteration and cheap comb honey. In 1872 I sold the first extracted honey in this town; my trade increased every year, until I had the misfortune to lose my bees by foul brood. An absence of 4 years has driven the extracted honey again to the wall. A few objections are ventured by consumers, and these are well considered by the Messrs. Dadant in their pamphlet on Extracted Honey, which should find its way into every home. Could this be accomplished the industrious bee-keeper would find a better income from his bees, while the idler, who has so much other work to demand his attention, who hardly ever opens a hive, and finds his task mostly completed in putting on and taking off the boxes, would be forced to give up the business, or give it the attention and care he does his cows, sheep, or farm, if he be a farmer. Any one who keeps bees because it affords an easy living, would soon find out the mistake if he undertook to produce extracted honey.

There is no telling how much honey might be consumed if the prevalent idea that it is a luxury which none but the rich can indulge was removed. People will buy a sugar and use it in the most lavish way who probably never taste honey from one year's end to the other, even if the price were equal, simply because they hold it a luxury which their means cannot indulge. Let all the bee-keepers stir themselves, and let the praises of extracted honey be heard throughout the land.

Berlin, Wis., March 20, 1881.

For the American Bee Journal.

Foul Brood.

W.

My eye caught an article in the JOURNAL for March 10, by H. L. Jeffrey, on this subject, in which he appears to differ from all the writers I have read on this important subject; but for 10 years this has been my opinion although I anxiously wished some one would commence its discussion, to cause apiarists to think and write about it, and lead to a proper knowledge of it; but I refrained from writing my sentiments because all who wrote about it seemed to think that foul brood was a disease to which bees were subject, and that the disease was spreading and might exterminate whole apiaries in large localities. The acts of the Michigan Convention is a proof.

Ten years since I had foul brood in my apiary, which led me to seriously reflect on the nature of the disease, and what would be the cure. I then formed my ideas, which I have had no occasion to alter. At that time one of my colonies especially was so badly affected with foul brood that the effluvia was very offensive, several feet from it, and when I opened the box and examined it, it was a mass of putrescence, and

although bees from healthy colonies entered to rob it, they certainly were not affected by it; this led me to believe that it was not contagious, but only the effect of want of proper judgment and application. Since that time I have used the means which I then determined on, and have not since seen the disease in my apiary, although I have had 80 colonies at once.

I am willing to give you my further experience on this matter if desired; I do not like to differ from so many able writers on this subject.

Let all who have suffered from this disease express themselves fully in your excellent BEE JOURNAL, no matter how ever little they write, and let this disease be properly explored.

Ontario, Canada.

[By all means, let us have the facts and experiences. We want "light."
—Ed.]

For the American Bee Journal.

The Use of Perforated Zinc.

O. O. POPPLETON.

"At the National Convention, in Cincinnati, Mr. Jones announced that he had made an important discovery. This discovery consists of a sheet of perforated zinc, to prevent the queen from laying in the upper story, or in part of the combs, as well as to hinder the bees from swarming, by preventing the queens from going out of the hives."

The above is an extract from an article published on page 67 of the BEE JOURNAL, which forms the text for the balance of the article. I notice that several others have written in the same strain.

I was present at the Cincinnati Convention, was quite near to Mr. Jones when he made the statement referred to above, and also had the advantage of an hour's conversation with him on the day after the Convention adjourned, nearly all of which was on this subject, and it is certainly news to me that he "announced that he had made an important discovery, which discovery consists of a sheet of perforated zinc to prevent the queen from laying in the upper story," etc. All that has been written in the BEE JOURNAL to prove that he is not the first inventor of using perforated zinc, is simply so much trouble thrown away, as he very distinctly stated that fact himself.

What Mr. Jones did claim was that he "had discovered a new method of using perforated zinc in a hive, so as to have the honey stored in sections in the centre of the hives instead of at the sides or on top." He remarked that he "first experimented with zinc with round perforations, but this did not work on account of the pollen being scraped off the bees legs as they passed through, but that while in Europe he noticed that bee-keepers there were using zinc with oblong perforations, the use of which remedied the objection to the use of round perforations."

It will be seen by this that Mr. Jones very plainly said that he first found the perforated zinc such as he uses, in Europe, being essentially the same statement that Mr. Dadant, in the article referred to, attempts to prove.

Mr. Jones said nothing whatever about preventing the queens from laying in the upper story, as the special advantage of his method was to have the honey stored in the lower, and in fact, only story in the hive.

The statement that this device can be used to prevent swarming is certainly a legitimate one for criticism, but I see that the reporter, in condensing Mr. Jones' remarks, was necessarily obliged to give this part of them more prominence than I think Mr. J. intended them to have. My recollection is that this part of his remarks was thrown in more as a suggestion than a fact.

I hope this article will prevent other writers from making the mistake of charging Mr. Jones with making the statement that he had first discovered the use of perforated zinc, or recommending it to prevent queens from going into upper stories, etc.

Williamstown, Iowa, March 18, 1881.



Ventura Co., Cal., Convention.

The Ventura Co. Bee-keepers' Association held their regular quarterly meeting in Santa Paula, Feb. 5, Vice-President Keene in the chair. The minutes of the last meeting were read and approved. The business committee reported through Mr. Wilkin, that no programme had been arranged for the meeting, and suggested that speaking on different subjects of interest to bee-keepers be the order of the day. As there was no other committee to report, the meeting took a business turn, and a general discussion ensued on the best and most economical way of canning honey for market.

Mr. Wilkin was called upon to give his views on small packages, as he had had considerable experience in that line the past season. He said that he had sold honey in Ventura, in small cans and netted one cent per pound more than that in large cans. He also stated that in the foreign markets honey was retailed in very small quantities, and that a great deal of our honey was re-canned for that purpose, and he therefore thought it best to can it in small cans at once.

Mr. Hund stated that a firm in New York had informed him that honey put up in 12 lb. tins would sell in that market as a retail package, and at a higher figure than in anything larger, and for the general trade he preferred them to anything smaller, and thought he should use them the coming season.

Mr. Wilkin stated that he had an order from England for a large lot of honey in that shape.

Messrs. Corey, Keene and others spoke in favor of small packages.

The convention adjourned after adopting the following preamble and resolution:

Whereas, The bulk of our honey is re-canned before it goes to the consumer, at a loss of first package and at a greater expense than we could do it at home, owing to the difficulty of getting it out of the cans, especially when candied (thus making a discount on candied honey) and other disadvantages, besides laying it liable to adulteration by unscrupulous dealers. Therefore be it

Resolved, By this association, that we recommend bee-keepers to—as much as possible—put their honey up in retail packages, such as 2 lb. tins full weight, and 12 lb. or gallon cans—the latter more especially preferred at present.

R. TOUCHTON, Sec.

Santa Paula, Cal.

Lancaster Co., Pa., Convention.

A meeting of the bee-keepers of Lancaster Co., Pa., was held on March 14, in Lancaster, Pa.

The meeting was called to order by the President, Mr. Peter S. Reist. The following members were present: Peter S. Reist, Litz; J. F. Hershey, Mt. Joy; Elias Hershey, Paradise; John S. Rohrer, city; Levi S. Reist, Oregon.

Peter S. Reist reported that out of about 60 colonies, which he had on the summer stands, he lost about 5 during the winter. He did not think any of them froze; several starved. The last time he saw them they were flying and appeared to be in good condition. He put a wind break on the back part of the hives, but the fronts were open, the same as in summer. He did not feed any during the winter.

John S. Rohrer said he had 6 colonies of bees; wintered them on the summer stands. About the 1st of November he cleaned the hives on top, and then closed them up with the exception of $\frac{1}{4}$ of an inch. When the warm weather came, his bees began to fly out. He thought a great many bees died during the winter owing to too much surplus being left in the hives. He made it always an object to prevent swarming; as soon as a cap is full he takes it away, and this he thought in a measure prevented swarming.

Mr. J. F. Hershey put his 113 colonies

into a bee-house. He divided a great many, and had lost so far 3 small colonies; the rest are in good condition, although not very strong in bees. In February he took them all out, and found many of them to have young bees. He then put them back again and they are in the house now, although he expects to take them out as soon as the weather gets warmer.

W. B. Detwiler, of Mt. Joy, put into the same style of winter quarters, 80 colonies, and had not lost one.

H. H. Myers, of Spring Garden, put into winter quarters 12 or 15 colonies of natives; and they were doing well. These bees were wintered in houses also. He found that those who left the bees unprotected had lost a great many.

Elias Hershey put into winter quarters 29 colonies, 9 of which died, and the rest are very weak. He heard from his neighbors, that a great many of theirs had died. He left his bees on the summer stands. His father, Jacob Hershey, had 10 colonies of natives; they were all well and hearty. Most of his bees had died of dysentery or diarrhoea, not of starvation; some of them died of cold.

Mr. Differndeffer called the attention of the society to the fact that the danger was not yet over. A great many of the colonies were weak, and he desired to know how they could be built up.

Mr. J. F. Hershey said the proper way was to take all the combs from them except just as many as they could conveniently cover. They should be well fed and carefully attended in regard to warmth; they should also be kept quiet. They should not be allowed to fly out very much in the spring, because a great many would get chilled and drop down. As soon as they are getting a little stronger, another comb should be given them, and in that way continue until you have a full-sized colony again. There are a great many of what are called weak colonies that can be kept alive, if they are attended to properly, but if left to themselves, they will surely die. The strong ones must also be carefully looked after. Everything should be kept clean and sweet about the hive, and the hives should be guarded against the cold air.

Levi S. Reist had on the summer stands, 3 colonies, and lost one. The other 2 are doing well. The one that died had not honey enough to carry it through the winter, and starved.

Adjourned to meet on the 2d Monday in May.

Read before the N. E. Convention.

The Great Revolution.

A. WEBSTER.

Are we on the eve of a great revolution in bee-keeping? Indications are that old things are passing away and all things are becoming new. Shall we not say rather that we are in the midst of a revolution that commenced with the invention of movable combs, has progressed through several stages and has not yet culminated? What then, is now wanted to complete this revolution and combine all the various improvements that are now in use in our harmonious system that shall be so nearly perfect as to win general approval and adoption?

I have given this subject long and careful consideration, and have been forced to the conclusion that it is a bee hive all parts of which shall be constructed and combined in strict accordance with the laws that govern the working instincts of the honey bee, and that shall harmonize those instincts with the convenience and wishes of the bee-keeper. Have we such a hive at present? I think not; or why does it not win general approval? The Langstroth hive has, perhaps, the most extended popularity of any. Yet who has not felt that it was not wholly satisfactory? Was not a perfect hive? The numerous, nay, almost innumerable changes and modifications that have been devised in this form of hive attest the general existence of this feeling. Do any of these modified hives satisfy and leave a conviction that there is nothing beyond? If not, why not? Can it be that the great defect is in some vital point which has been entirely over-

looked? Not entirely overlooked perhaps, for one inventor seems to have an inkling of the true mutual relations of the store and brood combs. He has adopted an original system, which is thought by some to promise grand results, but is not beyond criticism, and it is feared by others that an unfortunate choice of forms and combinations will in a measure, at least, counteract the advantages claimed.

And now having intimated that the mutual relations of the brood and store combs are the vital points in bee-hive construction that needs development, let me produce practical questions for discussion in this convention, and by bee-keepers generally. Questions of more vital importance than appears at first view, and that must be settled by mutual agreement among bee-keepers, before a universal bee hive and system of management, and a uniform honey box or set of boxes is possible.

What is the best thickness of space to give to each brood comb, in hives where foundation is used and drone rearing entirely exhausted? And what is the best thickness of space to give each store comb, either in sections for comb honey or frames for extracting or feeding that the same hive may be equally well adapted for either purpose?

Now in considering this question let us first of all inquire of those great masters of apicultural science, the honey bees, how they would answer them, if their purposes required a separation of the brood and store combs, as the bee-keepers do. Fortunately this answer is not hard to find nor difficult to understand. If we examine a box hive or bee-gum filled with combs by a strong colony during an abundant yield of honey, we shall find worker and drone combs in about equal numbers. We shall also find 8 combs to the foot—2 combs to 3 inches of space. When in use for breeding, the worker combs are $\frac{3}{4}$ of an inch thick and the drone combs $1\frac{1}{4}$. Now 7 and 10 have about the same ratio that the sides of a square has to its diagonal. Apportioning the space in a 12 inch hive in the same way gives $1\frac{1}{4}$ inches for each worker comb, and $1\frac{3}{4}$ inches for each drone comb. Therefore if we fill the breeding department of our hive with worker combs, giving each $1\frac{1}{4}$ inches of space and the storing department drone combs, giving each $1\frac{3}{4}$ inches of space, will it not be about right? Such seems to be the opinion of the bees, in which your essayist coincides.

This arrangement will give brood combs of sealed honey about $1\frac{1}{4}$ inches thick and store combs $1\frac{3}{4}$, or $1\frac{1}{2}$ inches thick if separators are used. Applying the same ratio to combs of greater thickness, we find that brood and store combs correspond to each other as follows, viz:

Brood Combs:	1 5-16 in.	Store Combs:	1 27-32 in.
"	1 6-16 in.	"	1 30-32 in.
"	1 7-16 in.	"	2 1-32 in.
"	1 8-16 in.	"	2 4-32 in.

I hope that these questions will be thoroughly discussed from every point of view, and an agreement arrived at if possible. Whatever it may be, I have no doubt that the bees will accept it gladly if suitable frames and foundations are furnished them. And for myself as an individual bee-keeper, I am willing to yield my opinions for the sake of uniformity. It would be better in this matter to be nearly right in harmony with the fraternity, than exactly right alone.

Programme of the Northwestern Bee-keepers' Union, to be held at Hastings, Minn., May 17, 1881:

- 1.—Address of Welcome, by J. N. Searls.
 - 2.—Reports of committees.
 - 3.—Reports from all—number, kind and condition of bees.
 - 4.—A paper by Pres. A. Tidball, on honey-producing plants and flowers.
 - 5.—A paper by Dr. P. Barton, of St. Paul, on honey as food and medicine.
 - 6.—Apiary culture and our fairs, by Hon. William Avery, of St. Croix Falls, Wis.
 - 7.—A paper on sales of honey, by F. B. Dorothy, of Taylor's Falls, Minn.
 - 8.—A paper on wintering bees, by L. Day, of Farmington.
 - 9.—Progressive bee-culture, by J. G. Teter.
- The above subjects will be open for discussion. In addition to the above, the following subjects are suggested:
- 1.—Essential properties of a good bee hive.
 - 2.—How to prevent and cure foul brood.
 - 3.—How to prevent spring dwindling.
 - 4.—Appointment of committees.
 - 5.—Election of officers. Adjournment.
- All bee-keepers are cordially invited. Entertainment free. F. B. DOROTHY, Sec.



THOMAS C. NEWMAN.
EDITOR AND PROPRIETOR.

CHICAGO, ILL., MAR. 30, 1881.

Repairing Losses by Dividing.

I began the last season with 10 colonies—8 blacks and 2 Italians—and lost all this winter but the Italians, which are strong and in good condition. I never read a bee book, nor saw the BEE JOURNAL till last fall. Had I subscribed for the BEE JOURNAL a year sooner, it would have saved me \$40. I thought I had a good start last summer in the business with 10 colonies, but now I have only 2. Can I build up these two, and ever hope to succeed? Will a good manual help me? What can I do with 50 or 60 frames of honey on which the bees starved? S. F. MILLER.

N. Manchester, Ind., March 12, 1881.

A seeming misfortune is sometimes a blessing in disguise, and we doubt not, with your spirit of inquiry and the experience of the past winter, you will so prove it. You have every facility for building up, and with the aid of a good manual and the hives and combs of honey left over from the wreck, it will be a work of interest and a profitable experience to replace your losses. Your untenanted hives we suppose to be exact duplicates of those now occupied by the Italians; if not, now is the time to overhaul them, as you should have but one style of hive. As soon as settled weather comes on, when fruit trees are in bloom and the air is redolent with the perfume of spring flowers, you can commence your work of dividing for increase, as follows: Remove your best colony to the stand where a new colony is to remain and place in its stead an empty hive, from the hive removed lift the frame on which you find the queen, and place with the queen in the empty hive on the old stand, now take another frame with sealed brood from the hive removed and place alongside the frame with the queen; close the remaining frames together in the hive from which the queen was removed, and put one of your old combs on each outer side, and you are done with the interior of this hive for ten days. Now, from your other colony (which you will leave on its old stand) remove three combs of sealed brood, shake off the bees, and place in the new hive with the queen; close the combs together, put one old comb on one side and two on the other, close the hive, and you are through with that for the present. The five combs with brood, in the new hive, place in the center, fill up the hive with old combs to its full complement, and your first division is completed. On the 10th day, remove both hives containing queens, and put empty hives where they stood; now from the queenless colony remove two frames each containing a queen-cell, and place one in each empty hive (if three frames cannot be found containing good cells, graft them in as directed in Cook's Manual, page 167) leaving one in the hive where found, and put in two frames of brood (one from each colony removed). This makes your queenless colony full. From the colonies with queens, remove four frames each and place in new hives, each four on their old stand. This will give you five hives, two containing five

frames of brood and queen cells, two with five frames of brood and queens, and one with eight frames of brood and queen cell. To the first four, place two old combs, one each side and put in a division board. Every three days add an old comb till full. If the month of May is warm and pleasant, and increase is the main object, you can divide again the first of June. About May 20, remove the queen from your best colony with the frame she is occupying, put her in an empty hive, then add two frames from each of the four with queens; now fill up each hive with old combs, and you have six hives occupied. Nine days after, or when the cells in the queenless colony are ripened, remove the five with queens, and start five new ones where they stood, by taking five frames of brood from each, grafting a good queen cell into each, and filling all up with combs or good foundation. During white clover bloom the colonies will build up very rapidly. In the absence of clean, bright combs, use good foundation, and supply it no faster than the bees can draw it out.

In all manipulations of this kind, do nothing without ascertaining first the whereabouts of the queen; with good Italians this is not difficult, and a slight oversight might be disastrous. Do not spread brood too rapidly, for if chilled disease may follow. Do not begin stimulating too soon; 10,000 bees and eight frames of sealed brood, on the 15th of May, in this latitude, will give better returns than 50,000 bees on April 1st, and a cessation of brood-rearing during the latter part of April and the month of May. We can see no economy in building up strong colonies very early, only to feed through the bleak weather, and die with age just when wanted most. With judicious dividing, and a late fall bloom, considerable surplus may be obtained, but very little early surplus, unless basswood is profuse, or sweet clover very abundant.

Mr. T. F. Bingham has removed to Abronia, Allegan Co., Mich., where his apiary is and has been located for years. Any letters, however, sent to Otsego will reach him, as it is only a few miles from Abronia.

We have received a copy of "The Domestic Advertiser," a compendium of household receipts, published by Mr. J. H. Nellis, Canajoharie, N. Y. Its 30 pages are full of good receipts of all kinds, and it will be valuable to every housewife.

Our correspondents have been so liberal with their communications that we have found it necessary to condense, and give them much of the room usually devoted to other departments.

This number of the BEE JOURNAL will be found intensely interesting. It embraces nearly every topic in bee-keeping, and contains news from all parts of the globe. During the storms of the last few months we have received many letters complaining of great irregularities and delays in the receipt of their paper. While these complaints are a gratifying proof of the interest with which the BEE JOURNAL is received, we regret their occurrence, and assure our readers that the paper has always been mailed promptly. The delays have been caused by the storms.



LONDON JOURNAL OF HORT.

Bees in New Zealand.—The following article from the *New Zealand Herald*, we find in the above excellent paper:

Among the many varieties of the honey bee few are held in greater esteem than the Italian variety, or, as it is generally called, the Ligurian bee. They are industrious workers, and delight in honey-gathering. In their hives there are fewer drones than in the hives of the common honey bee, and the queen produces eggs all the year round, though the number is considerably fewer in the winter season than during the warm days of summer. About the time of the American Centennial Exhibition, several attempts were made by Mr. Thomas Russell to introduce them to the province of Auckland, through agents he employed in San Francisco. The first efforts were made by sending queen bees, but the inmates of the several parcels of those that were forwarded all perished before reaching their destination. As a last effort a hive was sent forward, but it was evident that there was something still to learn to secure the safe transportation of these bees long distances, for they were nearly all dead before reaching Auckland, and the few sickly ones that reached here died a few days after being landed. The expense of these efforts was borne solely by Mr. Russell. Nor were Mr. Russell's failures to introduce these bees singular, for Mr. A. McKay, of Brisbane, who made efforts to the same end, at the same time was equally unsuccessful to enrich his adopted land.

Lut while the suggestion was made to the Colonial Industries Commission to spend £500 of public money to send a person home to make an attempt to do that in which so many failures had already been recorded, private and patriotic enterprise was successfully accomplishing that for which State aid was being solicited. Mr. S. C. Farr, Secretary of the Canterbury Acclimatization Society, had already communicated with R. J. Creighton, formerly of Auckland, and now in San Francisco, on the subject, and Mr. J. H. Harrison, of Coromandel, had also communicated with his brother, Mr. W. G. Harrison, San Francisco, formerly of Auckland, for the same object. As Mr. Creighton is regarded as the official representative of New Zealand in the City of the Golden Gate, both applications came to be referred to him. He made his arrangements accordingly, and the success that has attended them deserves public recognition on behalf of the colony. Mr. Creighton regarded these efforts at acclimatization as public enterprises, and not efforts for private gain, and acted accordingly. Hives were made upon a new construction, and a place provided in which was kept a wet sponge, which appears to have secured that cool and moist atmosphere necessary for bees, so that when they arrived they were as lively as possible, and seemed to be in vast numbers.

The two boxes were sent through the Acclimatization Society, and entrusted to the care of Capt. Cargill, at San Francisco, who took them into his own cabin, and daily attended to the wants of his lively colonists. Fresh water was daily supplied to the sponges, and everything done that was requisite to the health and comfort of the bees. The result is an unmistakable success, and the colonists of New Zealand are deeply indebted to Capt. Cargill and Mr. Creighton for what has been accomplished. Mr. Creighton, in his letter to Mr. Cheesman, the Secretary of the Acclimatization Society, states that Mr. Harrison is not to regard his hive as an object for private profit, but the bees are for the good of the colony, and when swarms are obtained they are to be distributed in the same way that he has been provided with them.

In August last Mr. A. H. Newman, of Chicago, shipped a full colony of bees to Mr. Thomas Wilson, at Kaipoi,

Canterbury, New Zealand, care of Mr. Creighton, San Francisco. These bees were received in New Zealand in good condition, considering the length of time in transit, and the hazardous portion of the trip from Chicago to San Francisco by rail. They were in a ten-frame Langstroth hive; his manner of preparing them was described in the BEE JOURNAL of Jan. 5, 1881. Mr. Wilson, in a letter to the editor of this paper, written in January, says this colony has been increased by the dividing process to four good colonies.

Mr. A. H. Newman informs us he has booked an order for several colonies this spring for Mr. A. V. Macdonald, Parnell, Auckland, New Zealand. We are in receipt of the following letter, dated Jan. 3, 1881:

....I have heard a statement made that the Ligurian bees, when they have not been obtaining flowers requiring the use of the long proboscis, gradually lose the length, and with the shorter tongue do not gather from red clover. As some colonies have already been obtained from the United States, it would be well to settle the point, Do Ligurian bees successfully fertilize red clover? I lately had a small swarm sent me from the country, minus the queen. I let them remain all night in the hive I had transferred them to, and in the morning shook them out, very weak and doleful, in front of a strong colony in full work, but a little on one side of the entrance, and left them to their fate. Half an hour afterwards I found them all on the alighting-board fraternized, the bees of the hive pushing through the throng with pollen, and others starting out without molesting them. I presume that the hive bees being very busy, and the queenless bees going quietly to the entrance, had not excited suspicion, and thereby obtained the same scent and were accepted. In this latitude we have no trouble with wintering bees so far as cold is concerned, but colonies are much weakened by working in winter when we have constant squalls of rain, which must destroy numbers.

A. V. MACDONALD.

At times when there is a scarcity of other nectar-yielding bloom, we have observed great numbers of Ligurian or Italian bees working on red clover; but only at such times. We do not believe it is a favorite with any honey bees, and is only utilized as a *dernier resort*, as are several other honey plants. That there is any permanent contraction or expansion of tongue is not true, though it might be possible to develop or obliterate physical traits by careful or negligent breeding.

Care of Weak Colonies.—Mr. F. L. Dougherty, in the *Indiana Farmer*, gives the following advice:

Many colonies that have passed the severe winter have come through in a very weak condition and will require careful handling to build them up into good colonies, ready for the honey yield when it comes. Weak feeding should be done inside the hive if possible. It is not necessary to make syrup with which to feed at this season, sweetened water is just as good, two parts sugar and one of water. The quantity to feed should depend on the strength of the colony, and should be placed as conveniently as possible to the brood cluster. If it can be given to them warm, so much the better. We know of nothing that will operate as effectually against spring dwindling as feeding this thin syrup. It gives the bees food and water, and this with sufficient heat, stimulates to brood rearing. Their instinct inclines them to cluster in the brood nest to keep up the necessary heat to accomplish this desirable result; and as they have both food and water inside the hive, and work to accomplish also, they seldom venture out unless the weather is so pleasant that they can easily return again.

SELECTIONS FROM OUR LETTER BOX

The Lime Remedy.—Clark county contains many practicable and enthusiastic bee-keepers. We are not all discouraged, as we have a few left yet. Such losses were never witnessed by the oldest inhabitants in this part of the country; one person had 40 colonies in a bee-house, all are now dead. Another had 32 on the summer stands; all gone but one; another had 60, half in cellar, half out doors; all are gone but 8; those in cellar did no better than those out doors. Another had 12; all gone. Another had 4; 2 are left. Another had 125, lost over $\frac{1}{2}$, 3 weeks ago. One had 9 and lost one. Another had 5 and all are dead. I lost 4 out of 10, in double-walled Langstroth hives except 3 colonies, which are now dead. I took to the lime project "like a duck to the water" and have used lime in 3 colonies and they are as strong as bees usually are in the middle of April. I like the Weekly BEE JOURNAL very much. J. C. OLDHAM.
Springfield, O., March 19, 1881.

Bee-Keeping in Kansas.—I bought 2 colonies last June, but did not get them home until July 5; they gathered enough honey for winter but no surplus. I am wintering them on the summer stands in Langstroth hives, with chaff cushion over the frames and an outer case, but not packing between the case and hive. They are wintering nicely, but had no flight all winter. Early plants are getting green, but we have had the hardest winter ever known here; twice the mercury was 18° below zero at sunrise. There are not many bees in this vicinity and what are here are poorly cared for, and some have died, as they have to go through the winter the best they can. Will Emerson's binder hold more than one volume of the Weekly JOURNAL? I wish the JOURNAL all prosperity. It is a welcome visitor. S. C. FREDERICK.

[The binder will hold but one year's numbers. They can be removed and and bound, and the binder used for years.—ED.]

Chaff Packing.—I have set some grape vines out in my bee yard and would like to put sawdust in if it will not hurt the grapes; if so, please answer in the JOURNAL. Bee-keeping was a failure last season; the bees obtained no honey from white clover, and not much from linden. The most honey I got was through August. I had 12 colonies last spring and got about 125 lbs. of surplus honey, all extracted. Increased to 22 and lost 5 through this cold weather. I now have 17 in the cellar. I put them in the cellar Dec. 10. They are doing well so far. I wish success to all the bee-keepers and the BEE JOURNAL. I take 4 bee-papers, and I think the Weekly the best of all. It is cheap at \$2 a year. DAVID K. KNOLL.
Salamonia, Ind.

[Keep the sawdust away from the roots of the grape vines.—ED.]

Wintered Safely by Chaff.—My bees gave but little surplus honey last season. I commenced the season with 18 colonies and increased to 34 by natural swarming. I never saw bees breed up so strong in numbers, and most of the hives were literally crowded. They went into winter quarters very strong and nearly all with plenty of honey, but our winter has been so severe and long that I feared for them. They had no flight until late in Feb., when I found they had dysentery. I examined them to-day. One froze just before New Year and one I found dead with empty combs; both were weak in the fall. I found one just out of honey and gave them some; the rest are strong in numbers and have plenty of honey. So I have saved 32 out of 34, which I call pretty good. I wintered on summer stands with chaff cushions on top, and entrance closed to about 2 inches. Sev-

enty-five per cent. of the bees in this vicinity are dead; many have lost all. I think the Weekly BEE JOURNAL is a great advance. Success to it.

A. D. STOCKING.
Ligonier, Ind., March 18, 1881.

Bees Strong and Healthy.—The reports from this section are: some have lost all their bees, some a part, and others report that their bees have wintered well. I placed 68 colonies in the cellar on Nov. 18, and put them out on March 16. The thermometer was at 45° , it being the first suitable day. They came out strong and healthy. My loss so far is one colony. C. H. FRANCE.
Erie, Pa., March 20, 1881.

Absorbents.—My bees are nearly all dead, but I can not give it up yet. I expect that some absorbent, such as quick-lime or sulphuric acid, would be of great advantage in wintering. The BEE JOURNAL is a pleasure to me. S. P. HYDE.
St. Joseph, Mo., March 16, 1881.

No Surplus nor Increase.—Bees fared badly in this section last year; there was no surplus nor swarms. I started in the spring with 20 good colonies; 4 having lost their queens I united them with others. I put 15 in the cellar in the fall; 2 perished, one was weak and died after taking them out. I left one out-of-doors in a double Langstroth hive, but it perished before winter was half over; the rest were in American hives. I have a double cellar, and put them into the outside one; it was too damp, and was kept about the freezing point. I put them in Nov. 15, and they did not get a flight until March 2; they have had several flights since. The bees in this part of the country have mostly perished. I sowed buckwheat, and last fall my bees obtained honey from it; I also sowed some alsike clover last spring; it took well and stood the winter better than red clover. I am pleased with the Weekly BEE JOURNAL. S. H. RUEHLEN.
Jerome, O., March 21, 1881.

Bees in Nebraska.—The past winter has been the severest we have had for 20 years. Snow still covers the prairie, one foot and a half deep. We cannot rely for honey on the natural production of our prairies; we must sow if we propose to reap. Our colonies are composed of Italians and the black bees; the Italians, of course, being our favorites. The black bee is a good honey gatherer, but as mean as it can be for stinging. Out of 54 colonies we have lost 8 up to the present time; some from starvation and others from dysentery; if they had not died from dysentery they probably would have starved. The intense cold weather continually from the beginning of winter until spring, did not allow them to move from one comb to another; consequently they could not reach their stores. I am speaking of those wintered out-doors, and not properly prepared, as was pretty generally the case here this winter. Our bees have mustard plant, clover, fruit blossoms, golden rod, buckwheat, and what they could get from other small blossoms that abound in the prairies. The prophecy that the year 1881 will be a good honey year makes the heart of the apiarist glad, for well he deserves a bountiful year. One man lost 60 out of 75; this is the greatest loss that we know of in this county. We hail the Weekly BEE JOURNAL with delight, and think that all interested in apiculture should have it. We pronounce it the best bee-paper in America. Is the Langstroth hive still covered with a patent? LEOPOLD MOLLER.
Fremont, Neb., March 22, 1881.

[There is no patent on the Langstroth hive now.—ED.]

Bees Starving in the Cellar.—Last evening I examined my bees in the cellar and found 8 dead, and others in a starving condition. I bought all the cream candy in the stores and sent for more. It is better for cellar feeding than syrup. Their condition takes me by surprise, as they were heavy last fall. J. E. CADY.
Medford, Minn., March 24, 1881.

Dovetailed Sections.—I will say to Mr. Lewis, that I was not comparing his dovetail work with his one-piece section. The advantage in a section that will stand firm at any angle, is that four of them put together will make a matched square, proving them to be square; can you make four solid blocks that will do it? Will one-piece sections do it, unless strained? As long as bees use glue (propolis) we need close joints to work rapidly and with comfort.

JAMES HEDDON.
Dowagiac, Mich., March 23, 1881.

Sundry Questions.—I was delighted with the Monthly BEE JOURNAL, but the Weekly is far more beneficial. It seemed so long to wait from one month to another, and even now I eagerly grasp the Weekly as soon as it comes, in the expectation of receiving something new every week. Last fall I had two colonies, but one of them is now dead. How can I clear the combs of dead bees? Will the combs do to put another colony into? My colonies had plenty of honey last fall. I often see it advised to put the hives within a few inches of the ground, but when a swarm gets away (as one of mine did) they often get into a hollow tree, a good height from the ground—Do they not in this act out their instinct? The one I lost went towards the "bush," not far away. This winter 2 men found a swarm in a tree, in that "bush," they cut it down, and obtained 2 pails of honey from it. I suppose them to have been my bees. It is said that bees never do well on the north side of a sheet of water. I am situated north of Lake Simcoe, and if that is true I shall not succeed. Is that theory correct? E. MOORE.
Barrie, Ont., March 14, 1881.

[Your first question is answered in the Weekly BEE JOURNAL of the 16th inst. To the second we answer, yes. The instinct governing a swarm of bees prompts them to fly up to the opening in a tree, so long as the opening will not come down to them. As a rule, bees do not thrive so well on the north side of large sheets of water. We suppose it is attributable to the fact that the heaviest honey flows are during the prevalence of the sultry southern winds of summer, enabling the bees to fly to the honey source direct from the hives, by following up the scent. If on the north side, the bees have to search for the nectar from the time they leave the hive, and face the wind when returning heavy laden.—ED.]

Bees Short of Stores.—Many bees have died here this winter, from being unprotected from the cold and being short of stores. IRA DAVIS.
Glass River, Mich., March 22, 1881.

Good Results.—I commenced the spring of 1879 with 6 colonies, increased to 13 and had 400 lbs. of comb honey; I wintered all safely in the cellar and on the summer stands, packed with chaff. Last year I had 31 colonies and obtained 1000 lbs of comb honey, and left the colonies 30 lbs. apiece to winter on. Thanks to the BEE JOURNAL and Cook's "Manual," I have lost no bees. I should be lost without the BEE JOURNAL. H. A. SWIFT.
Eaton Rapids, Mich.

Bees in good Condition.—Bees have suffered much this winter. Some beekeepers have lost all; others $\frac{1}{2}$ to $\frac{3}{4}$. All but me are using box hives. I started in the spring of 1880 with 8 colonies, and obtained 800 lbs. of comb honey and 165 lbs. of extracted, besides increasing to 20. I wintered on the summer stands, in a close shed, open to the south; I packed straw around the hives, and fine-cut straw in the caps, about 5 inches thick. I had 3 sticks under the quilt. I examined them on Jan. 29, and found them strong and heavy; most of them have brood. I think they will come out in good condition in the spring. I like the Weekly very much; it was too long to wait for the Monthly. Wisner, Mich. J. P. PHELPS, JR.

Life in the Midst of Death.—All around me bees have died. Many have lost all; others, one-half or two-thirds. After the storm in November I put 63 colonies into my cellar; most of them in the American hive. On March 15th I took them out, all alive but 2, and they were queenless last fall. They were all dry, with no signs of dysentery. Last summer I had 5 or 6 swarms, which I returned to the parent hive after cutting out the queen cells. Every 5 or 6 days they would swarm out without any queen cell in the hive. They did that 5 or 6 times each; I put them back each time, and they gathered a fair surplus of honey. What was the cause of such action? L. W. HARMON.
S. Yorkshire, N. Y., March 17, 1881.

[They were badly imbued with the swarming fever, which sometimes is as unaccountable as are some cases of abnormal swarming.—ED.]

Equal Loss In-Doors and Out.—The past winter has been a very hard one on bees, and our losses will come very near 25 per cent. However, we have enough left for seed, and will show them how quickly we can recover our losses. The percentage of losses is about equal in-doors and out. It seems useless to speculate as to causes—we might as well lay it to the winter as anything. "Facts are stubborn things," and theories—well, the bee-keeper that is not chock full of theory is either a very matter-of-fact person, or has not read the papers. I was among the number who felt very reluctant to part with the old AMERICAN BEE JOURNAL, but I must confess the new is so far superior, I am glad the change is made, and wish you all success. C. S. BURT.
Brecksville, O., March 21, 1881.

Why the Wire-Cloth Inside?—Our bees are happy—no losses worth mentioning. In the issue of March 9th, page 78, 4th column, in answer to W. R. Young, in speaking of boring the inch auger-hole in each end of the hive, why is the wire-cloth necessary, if the holes can be plugged when not needed? I should with my experience, for I use them, not put wire-cloth over the holes. I am thankful for the Weekly—it is good. R. C. TAYLOR.
Wilmington, N. C., March 16, 1881.

[During the hottest weather we frequently have cool nights, caused by excessive dews, when spiders and other insects take advantage of these holes to effect an entrance to the inside of the hive because of the heat; again, the moths gain easy access to the combs through these holes if not protected by wire-cloth, as they are never so well guarded by the bees as the entrances.—ED.]

Fresh and Frequent News.—I commenced last season with 19 colonies in Langstroth hives and increased to 28 by natural swarming. The season was very poor here; there was plenty of bloom but it seemed to contain no nectar. I obtained about 50 lbs. of comb honey but no extracted. I had to feed considerable in the fall. Winter commenced so early that I was unprepared. I packed 18 colonies in chaff; the rest were unprotected, and I express it mildly when I say that I was uneasy about them. Feb. 26 was a warm day, and the bees had their first really good flight since last Nov. I improved the opportunity to examine them and found 7 dead, 3 very weak, and the rest in fair condition; 4 of those dead were packed, 3 unprotected. It has been a hard winter on bees here, and winter is not over yet. Comb honey is all that is in demand here, but I intend to create a demand for extracted, if any Italians are left to gather it. I hope the JOURNAL will keep on agitating the adulteration question until there is something done. It is needless to say that I am pleased with the Weekly, it is so nice to get it fresh every week. I never lay it down until I have read it through. N. W. WILLIAMS.
North Uniontown, O., Feb. 28, 1881.

A Word to Bee-Keepers.—Snow to the tops of the hives, but the "blizzard" has moved on, or else the snow business has "played out," after falling continuously for 33 hours. We have lost bees from the middle of February untill date, and will not be able to ascertain how many until the snow leaves. We had a few mild days which we improved doubling up weak colonies. As soon as the weather is suitable, we shall try to make every bee do its very best—every one must count. We do not consider the cold winter our worst enemy, however, but glucose. It has deprived bee-keepers of more money than anything else; especially that mixture labeled "Vermont maple syrup." The honey crop last season was below an average, yet "honey is of slow sale." Can it be possible that the purest sweet under the heavens goes begging for a market, while millions of gallons of starch, impregnated with sulphuric and nitric acids, and sweetened with New Orleans molasses, finds ready sale? Bee papers are read principally by bee-keepers, who are all posted with reference to glucose, but the outside world is not. Bee-keepers, one and all, buckle on your armor, and endeavor to inform the masses what pure honey is, both by talking and writing for local papers everywhere. In this way, and in no other, can they be informed. **MRS. L. HARRISON.**
Peoria, Ill., March 21, 1881.

[Mrs. Harrison has struck the keynote in solving the whole problem; the people must be awakened to the frauds being practiced upon them, then with an irresistible impulse they will demand laws at the hands of Congress to stop the outrages. Meantime, we know of no one who wields an abler pen than does Mrs. Harrison, nor a better field for its local use than hers, with its score of papers.—ED.]

Foul Brood and Its Causes.—I have for years been of the opinion that bee-keepers generally were mistaken as to the cause of foul brood. I have just read an article in the Weekly BEE JOURNAL, by H. L. Jeffrey, of Woodbury, Conn., that expresses my views on that subject so fully, that I want to call the attention of the fraternity to it. Believing as I do, that the practical suggestions he has made are of the utmost importance, and if heeded, we will hear but few, if any complaints in the future, about "foul brood." Read this article; it is found on the 1st page of the number for March 16.

I. P. WILSON.
Burlington, Iowa, March 18, 1881.

Red Clover Italians.—I inclose the subscription for my welcome weekly visitor—the AMERICAN BEE JOURNAL. My bees are in good condition. I fed them plenty of coffee A sugar syrup, last fall, and then put them up in chaff. I only lost one colony, which was shaded with a large arba vita tree about 3 o'clock in the afternoon. This weakened the colony. My bees are all Italians. I have purchased queens from different breeders, but my best colonies are bred from queens obtained from my neighbor, Mr. J. A. Bucklew; they were bred from his red-clover queens and are the best workers I ever saw. The queens are very prolific. Success to the Weekly BEE JOURNAL.

THOMAS WOLFE.
Franklin, O., March 19, 1881.

The Cause of Losses in Winter.—Bees as far as I can learn, in this section of Ohio, are nearly all dead. Our most extensive bee-keeper has but 18 colonies left out of 80; all were well protected by chaff. Another lost all—50 colonies. Others have lost all but 1 or 2. I have saved nearly $\frac{1}{2}$, although some were not in as good condition to winter as they should have been; that is, they had old queens and consequently less bees that were strong and vigorous for so long and severe a winter. Why so many bees died in winter I do not know; yet I am satisfied that it is not all caused by the cold. If bees were in first-rate condition for winter—that is the bees themselves—and then perfectly protected, the loss would be small; but

without this condition, protection is only a partial remedy in such winters as this where bees have been confined 114 days as ours have been. Although last season was a poor one for surplus, I obtained my share and could make money, even in as poor a year as that, and if this season shall prove a good one, I want to see what I can do, as there has not been a good season since I have been in the business. The price of honey in frames is the same as last fall, but there is plenty of honey in the market at from 10 to 15 cts.; it is from hives where bees have died, and in some cases I find the honey is sour.

P. R. HUNT.
Plattsville, Ohio, March 16, 1881.

Bees Tried to their Utmost Endurance.—My bees are doing well considering circumstances. I have some in chaff hives and some in single-wall hives, packed with chaff, on the summer stands. Those in chaff hives are quiet and dry inside, while those in the Langstroth hives are damp, and the bees are uneasy; they cannot endure it much longer without a flight. It is now 133 days since they have been confined to their hives. There are but few bees in this country, and they are nearly all kept by farmers, and are put away in the fall in a kind of "live if you will, or die if you must" fashion, and most of them will be dead if this weather continues much longer. We are having another "blizzard" to-day; wind, snow and sleet, with 3 feet of old snow on the ground, and it has been snowing for 12 hours. This is the fourth time the railroads have been blockaded this winter. Does it ever get warm enough for bees to fly with snow on the ground? The snow is 4 feet deep in my bee yard. We are very much pleased with the BEE JOURNAL since it became a weekly. We could hardly get along without it.

D. S. BURBANK.
Reinbeck, Iowa, March 11, 1881.

[Bees frequently have their winter flight while the ground is covered with snow. Straw or hay should be scattered over the surface for the bees to alight on, in case they become weak or chilled.—ED.]

My Report to Date.—Is one colony dead out of 6 wintered in cellar. I put them out for a flight on March 12. I think they are all right. The one, I think, had too few young bees; it had been queenless for about 2 months, when I gave them a Cyprian queen late last fall.

C. A. STEVENS.
Quebec, Canada, March 19, 1881.

Homer Redivivus.

I've read the Weekly JOURNAL through—The advertisements, I read those, too. It is just exactly what I want. For it is now the best extant; And after having such a freeze, I'll tell you something about my bees: I have in cellar forty "stands," (A part of them have golden bands); Out-of-doors I had forty-four; But some have died—I think a score; The bees in-doors are doing well, While those left out have gone to—"That bourne from whence no traveler returns."

Bigelow Mills, Ind. AZAHIAH WILLIAMS.

Bees in Northern Kentucky.—Here $\frac{1}{2}$ of the bees died of dysentery, and perhaps a few starved. About the middle of Nov. I fed some of my bees, and packed them, in fair condition for winter. When the cold weather commenced so suddenly I thought I would wait for a warm day to pack the rest, but it has not yet come; the ground is frozen and it is snowing to-night. From 40 colonies in Nov. I have at the present 21 left. The 14 colonies that I fed and packed are all alive, and all but one colony are in good condition; all have brood since the middle of Jan. My 6 colonies of Italians gathered more fall honey than all my blacks, but ceased breeding earlier in the fall and commenced later this winter. But I like them to rear queens from, if nothing else, on account of their being readily seen when first emerged from the cell. The losses in my neighborhood are about as follows: A., 3 lost out of 8 colonies; B., 18 from 24; C., 14 from 16; D., 17 from 34, and many have lost all. But I have not lost all hopes yet. Success to the Weekly BEE JOURNAL.

A. W. STITH.
Dividing Ridge, Ky., March 3, 1881.

Feeding and Extracting.—1. Will rye-meal in syrup, to feed bees in early spring, answer the same purpose as when fed in candy?

2. Can an extractor be used to remove honey from pieces of comb as they come out of gum hives when taking up or transferring? I like the BEE JOURNAL very much, and think it is invaluable.

MRS. O. F. DEAN.
Carthage, N. Y., March 21, 1881.

[1. Yes; but we prefer giving it separately, using for that purpose unbolted rye-meal, and putting it in pans at a short distance from the hives. If pollen is needed the bees will carry it in, even though honey or syrup be exposed in close proximity.

2. Yes; all of the modern extractors will clean the pieces nicely.—ED.]

Melange.—1. When bees are working in the surplus boxes, does it do any harm to remove a frame of sealed brood from the brood chamber once in two weeks, to strengthen nuclei, and put in a sheet of comb foundation?

2. When surplus honey is wanted instead of increase, is it not best to prevent swarming by giving plenty of room, and then make up the increase between basswood bloom and buckwheat, by stimulating the queens?

3. How many feet to the pound should comb foundation be for brood chamber and surplus boxes?

4. When and where was the honey bee first mentioned in ancient history, and who was the first that kept them for pecuniary profit?

5. In preparing bees for winter, how many frames with two-thirds empty combs would be required for a strong colony to cluster on? I gave 6 with 2 full frames of honey, and the bees starved.

E. S. M.
Butternut Ridge, March 21, 1881.

[The above letter was unaccompanied with the writer's name, and would have been consigned to the waste basket, had the questions not been of a general nature. Courtesy requires that the name should accompany the communication, though not necessarily for publication.

1. It does harm, in that it interferes with the reinforcement of the workers as they die from age and casualties.

2. Many successful apiarists pursue the course suggested.

3. For brood frames, $4\frac{1}{2}$ to 5 feet; for surplus boxes, if used as small starters, the same weight will answer; if full size, 10 to 12 feet.

4. Honey and bees are frequently referred to in the Old Testament. Canaan is mentioned as a land flowing with milk and honey, and when Abraham's sons went to Egypt to buy corn, they took honey with them as a present to the Egyptian ruler—Gen. 43: 11. The honey bee was extolled in verse and prose by Homer, Herodotus, Aristotle, Cato, Virgil, Pliny, Columella and other ancient writers. A more extended reference to this subject will be found on pages 5-8, of the pamphlet "Honey, as Food and Medicine." The last clause of the question we cannot answer.

5. Two are enough; three are a great abundance.—ED.]

Wintering in a Cave.—I have wintered in a cave for 4 years, with very small loss; some years none. The cave cannot be too warm, if it is perfectly dry; then there is no mildew on the combs. My bees come out stronger in the spring than when I put them away in the fall. If damp, the loss will be great and all the combs nearly spoiled.

D. S. WAY.
Urbana, Iowa, March 13, 1881.

Bees Are Scarce.—The bees in this section are scarce; over one-half of them have died during the past severe winter.

S. J. DAVIS.
Goldsmith, Ind., March 14, 1881.

Late Spring.—Spring was late in coming, but my bees are doing well—all breeding nicely, having already reared one litter of brood. The maple bloom is about over now. Peach buds are opening slowly. I look for a good honey season this year.

S. C. DODGE.
Chattanooga, Tenn., March 18, 1881.

One Half of the Bees Dead.—About $\frac{1}{2}$ of the bees in this section, as far as far as heard from, are dead. One man reports a loss of 149 out of 150 colonies, but they had no care whatever.

O. B. RANNEY.
Kalamazoo, Mich., March 19, 1881.

Bees Carrying in Pollen.—My bees are carrying in pollen from soft maples to-day. I have lost 3 weak colonies out of 52, and I do not expect to lose any more. I left some on the summer stands unprotected, as an experiment, but they starved with plenty of honey in the hives; it was too cold for them to reach it.

JOHN BOERSTLER.
Gilead, Ill., March 15, 1881.

Purifying Wax.—Will some of the numerous readers of the BEE JOURNAL give us the best mode of cleansing and purifying wax? I received a sample of comb foundation from Messrs. Dadant & Son which is really beautiful, it is so clear and yellow. A few hints would be of great value. I like the Weekly BEE JOURNAL.

D. V. BEACOCK.
Brockville, Canada, March 22, 1881.

[Perhaps Messrs. Dadant & Son, and others, will give their methods of purifying and cleansing beeswax.—ED.]

Wintering in Box Hives.—Bees in this vicinity, kept in box hives, have done well, and there seems to be no winter-killing or loss; but those in Langstroth and other movable comb hives, have suffered at a rate; of from one-tenth to one-third. I have lost 3 out of 8; those lost were in Langstroth hives; 2 Langstroths kept well; my other 3 were not movable combs. Bees here are carrying in pollen in large quantities from the silver poplar and water maple, and looking healthy and in fine condition. At first I did not like the change, but now I am delighted with the Weekly JOURNAL.

R. A. MOLLYNEAUX.
New Richmond, Ohio, Mar. 18, 1881.

Chaff Packing Triumphant.—I have just examined my bees after their long winter's nap, and I feel like throwing up my hat and whistling big, for I am "out of the woods" for this winter. I have not lost a colony and never saw bees in better condition at this season. I feel very jubilant over my success, for they were not in the best condition for wintering. Our winter has been long and severe; the thermometer has stood as low as 25° below zero. My bees had no good flight from Nov. till Feb. Chaff hives and chaff packing did the business. I winter on the summer stands, and from observation and experience I have about come to the conclusion that, with proper protection, that is the way to winter bees. At some future time I will give a detailed account of how I packed my bees, and the material used, (for I had them packed in different ways) and my experience with the different kinds of packing. I hope that bee-keepers will report their last winter's experience and the manner of wintering minutely, and the result by so doing. I think that we will develop something that will be of lasting benefit to us all, in the way of successfully wintering bees. The Weekly BEE JOURNAL is a splendid thing for bee-keepers, and that it may be just as good a thing for its publisher is my earnest desire.

J. W. HENDERSON.
Burlington, Kan., March 15, 1881.

Portable Sheds for Winter.—I have 21 colonies of bees in portable sheds, with shingle roof (3 in each shed), packed in chaff and wheat straw. They are all right. I left 6 colonies on summer stands without protection and lost 3 of them; another is quite weak. More than $\frac{1}{2}$ of the bees in this neighborhood are dead.

P. S. VANRENSELAER.
LaCarne, O., March 21, 1881.

Local Convention Directory.

1881. Time and Place of Meeting.
 April 2-8. W. Iowa, at Corning, Iowa.
 5-Central Kentucky, at Winchester, Ky.
 Wm. Williamson, Sec. Lexington, Ky.
 7-Union Association, at Eminence, Ky.
 E. Drane, Sec. pro tem, Eminence, Ky.
 7-N. W. Ohio, at Delta, Ohio.
 13-N. W. Missouri, at St. Joseph, Mo.
 D. G. Parker, Pres., St. Joseph, Mo.
 May 4-Tuscarawas and Muskingum Valley, at Cambridge, Guernsey Co., O.
 J. A. Bucklew, Sec. Clark, O.
 5-Central Michigan, at Lansing, Mich.
 10-Cortland Union, at Cortland, N. Y.
 C. M. Bean, Sec. McGrawville, N. Y.
 11-S. W. Wisconsin, at Darlington, Wis.
 N. F. France, Sec. Platteville, Wis.
 12, 13-Texas Bee-Keepers' Association, at McKinney, Collin Co., Texas.
 W. R. Howard, Sec. Kingston, Hunt Co., Tex.
 Sept.-National, at Lexington, Ky.
 -Kentucky State, at Louisville, Ky.
 Oct. 18-Ky. State, in Exposition Bldg., Louisville, Ky.
 W. Williamson, Sec. Lexington, Ky.

In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

CLUBBING LIST.

We supply the Weekly American Bee Journal and any of the following periodicals, for 1881, at the prices quoted in the last column of figures. The first column gives the regular price of both:

Publisher's Price.	Club.
The Weekly Bee Journal (T. G. Newman) \$2.00	\$2.00
and Gleanings in Bee-Culture (A. I. Root) 3.00	2.75
Bee-Keepers' Magazine (A. J. King) 3.00	2.50
Bee-Keepers' Exchange (J. H. Nellis) 2.50	2.25
The 4 above-named papers 4.75	3.75
Bee-Keepers' Instructor (W. Thomas) 2.50	2.25
Bee-Keepers' Guide (A. G. Hill) 2.50	2.25
The 6 above-named papers 5.75	4.00
Prof. Cook's Manual (bound in cloth) 3.25	3.00
Bee-Culture (T. G. Newman) 2.40	2.25

For Semi-monthly Bee Journal, \$1.00 less.
 For Monthly Bee Journal, \$1.50 less.

Honey and Beeswax Market.
BUYERS' QUOTATIONS.

CHICAGO.

HONEY.—The market is plentifully supplied with honey, and sales are slow at weak, easy prices. Quotable at 16¢/lb. for strictly choice white comb in 1 and 2 lb. boxes; at 14¢/lb. for fair to good in large packages, and at 10¢/lb. for common dark-colored and broken lots. Extracted, 9¢/lb.

BEESWAX.—Choice yellow, 20¢/lb.; dark, 15¢/lb.

NEW YORK.

HONEY.—Best white comb honey, small neat packages, 14¢/lb.; fair do., 14¢/lb.; dark do., 11¢/lb.; large boxes sold for about 2¢ under above. White extracted, 9¢/lb.; dark, 7¢/lb.; southern strained, 6¢/lb.

BEESWAX.—Prime quality, 20¢/lb.

CINCINNATI.

HONEY.—The market for extracted clover honey is good, at 9¢/lb. Comb honey is of slow sale at 16¢ for the best.

BEESWAX.—18¢/lb. C. F. MUTH.

SAN FRANCISCO.

HONEY.—The "Vigilant" takes 600 cases to Liverpool. There is a slightly improved feeling consequent upon a little more inquiry, but prices show no material appreciation. Discounting reports are received from the southern part of the State, as to the prospects of the coming crop, but other sections give promise of an abundant yield. With a good supply yet on the market, prices are not apt to be buoyant until the anticipated failure is more fully settled. We quote white comb, 12¢/lb.; dark, 10¢/lb.; extracted, choice to extra white, 5¢/lb.; dark, and candied, 5¢/lb.

BEESWAX.—22¢/lb. as to color.
 STARNES & SMITH, 423 Front Street, San Francisco, Cal., March 11, 1881.

SPECIAL NOTICES.

Constitutions and By-Laws for local Associations \$2 per 100. The name of the Association printed in the blanks for 50 cents extra.

"What is the meaning of 'Dec. 81' after my name on the direction-label of my paper?" This question has been asked by several, and to save answering each one, let us here say: It means that you have paid for the full year, or until "Dec. 31, 1881." "June 81" means that the first half of the year is paid for, up to "July 1st." Any other month, the same.

We will send sample copies to any who feel disposed to make up clubs for 1881. There are persons keeping bees in every neighborhood who would be benefited by reading the JOURNAL, and by using a little of the personal influence possessed by almost every one, a club can be gotten up in every neighborhood in America. Farmers have had large crops, high prices, and a good demand for all the products of the farm, therefore can well afford to add the BEE JOURNAL to their list of papers for 1881.

HUNDREDS OF MEN, WOMEN AND CHILDREN rescued from beds of pain, sickness and almost death and made strong and hearty by Parker's Ginger Tonic are the best evidences in the world of its sterling worth. You can find these in every community.—Post. See advertisement. 9w4t

When changing a postoffice address, mention the old address as well as the new one.

We have prepared Ribbon Badges for bee-keepers, on which are printed a large bee in gold. Price 10 cents each, or \$8.00 per hundred.

The Volume of the BEE JOURNAL for 1880, bound in stiff paper covers, will be sent by mail, for \$1.50.

Notices and advertisements intended for the Weekly BEE JOURNAL must reach this office by Friday of the week previous.

Instead of sending silver money in letters, procure 1, 2 or 3 cent stamps. We can use them, and it is safer to send such than silver.

LADIES WHO APPRECIATE ELEGANCE and purity are using Parker's Hair Balsam. It is the best article sold for restoring gray hair to its original color and beauty.

The date following the name on the wrapper label of this paper indicates the time to which you have paid. In making remittances, always send by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, and local checks, are not taken by the banks in this city except at a discount of 25¢, to pay expense of collecting them.

PREMIUMS.—For a club of 2, weekly we will give a copy of "Bee-Culture;" for a club of 5, weekly, we will give a copy of "Cook's Manual," bound in cloth; for a club of 6, we give a copy of the JOURNAL for a year free. Do not forget that it will pay to devote a few hours to the BEE JOURNAL.

Sample copies of the Weekly BEE JOURNAL will be sent free to any names that may be sent in. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Any one desiring to get a copy of the Constitution and By-Laws of the National Society, can do so by sending a stamp to this office to pay postage. If they desire to become members, a fee of \$1.00 should accompany it, and the name will be duly recorded. This notice is given at the request of the Executive Committee.

It would save us much trouble, if all would be particular to give their P.O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name. Many others having no Post-office, County or State. Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

At the Chicago meeting of the National Society we were requested to get photographs of the leading apiarists, to sell to those who wanted them. We can now supply the following at 25 cents each: Dzierzon, the Baron of Berlepsch, and Langstroth. The likeness of Mr. Langstroth we have copied, is one furnished by his daughter, who says, "it is the only one ever taken when he was in good health and spirits." We are glad to be able to secure one of such a satisfactory nature.

We have filled orders for quite a number of Binders for the Weekly BEE JOURNAL. We put the price low, 30 per cent. less than any one else could afford to sell them, for we get them by the quantity at wholesale and sell them at just enough to cover the cost and postage, the latter being 21 to 23 cents, on each. We do this to induce as many as possible to get them, and preserve their Weekly numbers. They are exceedingly convenient; the JOURNAL being always bound and handy for reference. The directions for binding are sent with each one.

Wire Nails.

There being considerable demand for wire nails, I have concluded to carry a stock of them, and can fill orders for any quantity promptly. For nailing Sections, Cases, Frames, Racks, Crates, &c., they have become quite popular.

The entire length of the nail being the same thickness, they never loosen as ordinary iron nails will, and are not as liable to bend or break.

From the assortment of lengths given in the table below, any kind of nailing may be done with these nails, even to making large boxes.

1/2 inch long, wire No. 20, per lb.	34c.
" " " " " " " "	25c.
" " " " " " " "	22c.
" " " " " " " "	20c.
" " " " " " " "	18c.
" " " " " " " "	16c.
" " " " " " " "	14c.
" " " " " " " "	12c.
" " " " " " " "	10c.
" " " " " " " "	8c.
" " " " " " " "	6c.
" " " " " " " "	4c.

If wanted by mail add 18 cents per lb. for postage.

ALFRED H. NEWMAN,

972 West Madison St., CHICAGO, ILL.

Valuable Book
Of Over a Thousand Pages.

The Crowning Culmination! A \$5 Book for \$2.50!!
 MOORE'S UNIVERSAL ASSISTANT,

And Complete Mechanic, 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every

Mechanic, Farmer, and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millwrights, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilie's Metal and Wood Workers of every kind, Builders, Manufacturers and Mechanics. 500 ENGRAVINGS of Mill, Steam, and Mining Machinery, Tools, Sheet Metal Work, Mechanical Movements, Plans of Mills, Roofs, Bridges, etc. Arrangement and Speed of Wheels, Pulleys, Frums, Belts, Saws, Droring, Turning, Planing, & Drilling Tools, Flour, Grinders, Saw, Shingle, Paper, Cotton, Woolen & Filling Mill Machinery, Sugar, Oil, Marble, Threshing & Rolling Mill, do., Cotton Gins, Presses, &c. Strength of Teeth, Shading, Beiling, Friction, Lubricating, Screws, Cutting, Grinding, Engraving, Dressing, Repairing and Operating, Setting of Valves, Eccentricity, Link & Valve Motion, Steam Packing, Pipe & Boiler Covering, Scale Preventives, Booming, Heating, Ventilation, Gas & Water Works, Hydraulics, Mill Dams, Hoars, Lower of Streams, etc. On Blast Furnaces, Iron & Steel Manufacture, Prospecting and Exploring for Minerals, Quartz and Placer Mining, Assaying, Amalgamating, etc. 461 TABLES with 80,000 Calculations in all possible forms for Mechanics, Merchants and Farmers. 630 Items for Printers, Publishers and Writers for the Press. 1,000 Items for Grocers, Confectioners, Physicians, Druggists, etc. 300 Items, 300 do. for Painters, Varnishers, Glaziers, etc. 500 do. for Watchmakers & Jewelers. 400 do. for Hunters, Trappers, Tanners, Leather & Rubber Work, Navigation, Telegraphy, etc. 100 do. for Engineers, etc. in detail. Strength of Materials, Effects of Heat, Fuel Values, Specific Gravities, Freight by rail and water—Car Load, Storage in Ships, Power of Steam, Water, Wind, Shrinkage of Castings, etc. 10,000 Items for Housekeepers, Farmers, Gardeners, Stock Owners, Bee-keepers, Lumbermen, etc. Fertilizers, full details. Rural Economy, Food Values, Care of Stock, Remedies for do., to increase Crops, Pest Poisons, Training Horses, Steam Power on Farms, LATHING CALCULATORS for Cubic Measures, Ready Reckoner, Produce, Rent, Board, Wages, Interest, Coal & Tonnage Tables. Land, Grain, Hay, & Cattle Measurement. Set of Ploughing, Plinting & Breeding Tables, Contents of Granaries, Crib, Tanks, Cisterns, Boilers, Logs, Boards, Scantling, etc., at sight. Business Forms, all kinds, Special Laws of 19 States, Territories and Provinces (in the U. S. and Canada), relating to the Coll. of Debits, Exemptions from Forces, Fug. Mechanics' Lien, the Jurisdiction of Courts, Sale of Real Estate, Rights of Married Women, Interest and Usury Laws, Limitation of Actions, etc.

Forms complete treatises on the different subjects. Ret. Am.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Free by mail, in fine cloth, for \$2.50; in leather, for \$3.50. Address

For Sale by

THOMAS G. NEWMAN.

974 West Madison Street, CHICAGO, ILL.

Agents: Furnish pleasant, profitable employment. Local Printing House, Silver Creek, N. Y.

HONEY WANTED.—I desire to purchase several barrels of dark extracted honey, and a few of light; also, Comb Honey. Those having any for sale are invited to correspond, giving particulars.

ALFRED H. NEWMAN

972 West Madison street, CHICAGO ILL.

THE BRITISH BEE JOURNAL,
AND BEE-KEEPER'S ADVISER.

The British Bee Journal is published monthly at \$1.75, and contains the best practical information for the time being, showing what to do, and when and how to do it. C. N. ABBOTT, Bee Master, School of Apiculture, Fairlawn, Southall, London.

FREE TO ALL.

OUR new Illustrated Plant and Seed Catalogue of 50 pages, containing descriptions and prices of best varieties of Plants, Flowers, Seeds, Bulbs, etc. in cultivation, is a colored Plate of our NEW DOUBLE WHITE ROSEAUARDIA will be mailed upon the receipt of a three-cent stamp for postage. Special Price-list of Season Fruit-Goods guaranteed first quality. Liberal offers to growers up of clubs. Wholesale & Retail. S. A. NEENE, Louisville, Ky.

Books for Bee-Keepers.

Cook's Manual of the Apiary.—Entirely rewritten, greatly enlarged and elegantly illustrated, and is fully up with the times on every conceivable subject that interests the apiarist. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper covers, \$1.00, postpaid. Per dozen, by express, cloth, \$12; paper, \$9.50.

Quincy's New Bee-Keeping, by L. C. Root.—The author has treated the subject of bee-keeping in a manner that cannot fail to interest all. Its style is plain and forcible, making all its readers sensible of the fact that the author is really the master of the subject. Price, \$1.50.

Novice's A B C of Bee-Culture, by A. I. Root. This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25; paper, \$1.00.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00; paper, 75c.

Langstroth on the Hive and Honey Bee. This is a standard scientific work. Price, \$3.00.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, \$1.00.

Bee-Culture; or Successful Management of the Apiary, by Thomas G. Newman.—This pamphlet embraces the following subjects: The Location of the Apiary—Honey Plants—Queen Rearing—Feeding—Swarming—Dividing—Transferring—Italianizing—Introducing Queens—Extracting—Quelting and Handling Bees—The New Method of Preparing Honey for Market, etc. It is published in English and German. Price for either edition, 40 cents, postpaid, or \$3.00 per dozen.

Food Adulteration! What we eat and should not eat. This book should be in every family, where it ought to create a sentiment against the adulteration of food products, and demand a law to protect consumers against the many health-destroying adulterations offered as food. 200 pages. Paper, 50c.

The Dzierzon Theory.—presents the fundamental principles of Bee-culture, and furnishes a condensed statement of the facts and arguments by which they are demonstrated. Price, 15 cents.

Honey, as Food and Medicine, by Thomas G. Newman.—This is a pamphlet of 24 pages, discussing upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the market; Honey as an article of food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, &c.; and Honey as Medicine, followed by many useful Recipes. It is intended for consumers, and should be scattered by thousands all over the country, and thus assist in creating a demand for honey. Published in English and German. Price for either edition, 6c., per dozen, 50c.

Wintering Bees.—This pamphlet contains all the Prize Essays on this important subject that were read before the Centennial Bee-Keepers' Association. The Prize—\$25 in gold—was awarded to Prof. Cook's Essay, which is given in full. Price, 10c.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dandant, Hamilton, Ill. This gives in detail the methods and management adopted in their apiary. It contains many good and useful hints, and is well worth the price—15c.

Practical Hints to Bee-Keepers, by Chas. F. Muth, Cincinnati, Ohio; 32 pages. This pamphlet gives Mr. Muth's views on the management of bees, and embraces several of his essays given at Conventions, etc. It will be read with interest by beginners as well as those more advanced in the science of bee-culture. Price, 10c.

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has a large number of good recipes, a table of doses, and much other valuable horse information. Paper, 25c.

Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, 25c.

Moore's Universal Assistant contains information on every conceivable subject, as well as receipts for almost everything that could be desired. We doubt if any one could be induced to do without it, after having spent a few hours in looking it through. It contains 400 pages, and 50 engravings. Cloth, \$2.50.

Ropp's Easy Calculator.—These are handy tables for all kinds of merchandise and interest. It is really a lightning calculator, nicely bound, with slate and pocket for papers. In cloth, \$1.00; Morocco, \$1.50. Cheap edition, without slate, 50c.

Sent by mail on receipt of price, by

THOMAS G. NEWMAN,

974 West Madison Street, Chicago, Ill.

Binders for the Bee Journal



Binders for the Weekly Bee Journal, of 1881, cloth and paper, postpaid, 65 cents.

We can furnish Emerson's Binders, gilt lettered on the back, for AMERICAN BEE JOURNAL for 1880, at the following prices, postage paid:

Cloth and paper, each.....50c.
 Leather and cloth.....75c.

We can also furnish the Binder for any Paper or Magazine desired.

THOMAS G. NEWMAN,

974 West Madison Street, Chicago, Ill.

Volume 12 begins January 1881. SUBSCRIPTION,
\$1.00 per year. Specimen Copy, 10 cents.
C. J. WARD, Editor and Proprietor
182 CLARK ST., - CHICAGO